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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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LSI LOGIC CORPORATION  
1621 BARBER LANE  
MS: D-106  
MILPITAS, CA 95035

EXAMINER

NATNAEL, PAULO S M

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/726,819	<b>Applicant(s)</b> MOGRE ET AL.	
	<b>Examiner</b> Paulos M. Natnael	<b>Art Unit</b> 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9,11-14,16-19 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4,6-9,21 and 22 is/are allowed.
- 6) ☒ Claim(s) 11,13,14,16,18,19,23,25 and 27 is/are rejected.
- 7) ☒ Claim(s) 26 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **11,13,16,18, 23,25 and 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Fimoff et al., U.S. Pat. No. 6,529,558.

Considering claim **11**,

a) a converter configured to convert a symbol stream into an encoded stream comprising a plurality of symbols into an encoded stream, is met by Data Acquisition 130, Fig. 15b, which clearly outputs encoded symbols as shown.

b) a turbo decoder configured to decode said encoded stream to produce an data stream, is met by Viterbi decoder 138, fig.15b

c) a synchronization remover configured to remove a synchronization signal from said data stream, is met by sync stripper 140,fig. 15b. (read col. 17, lines 28-32)

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Considering claim **13**, the system of claim **11**, wherein said turbo decoder comprises: a plurality of decode modules configured to decode said encoded stream to produce said data stream, is met by 9-way Viterbi decoder, fig. 27.

Considering claim **16**, Claim **16** is a method claim of Claim **11** and, therefore, Claim **16** is rejected for the same reasons as in Claim **11**.

Claim **18** is method claims of Claim **13** and thus claim **18** is rejected for the same reasons as in claim **13**.

Considering claim **23**, a demodulator configured to demodulate a signal to produce a said symbol stream capable wherein each of said symbols consists of two error protected bits and one redundant bit, is met by the Demodulator 128, Fig. 15b.

Considering claim **25**,

a) a deinterleave module configured to arrange said data stream into an error protected block stream, is met by deinterleavers 142 and 144, fig.15b.

b) an error correction decoder configured to decode said error protected block stream to produce a block stream, is met by RS decoder 146, fig.15b.

Considering claim **27**, is a method claim of Claim **25** and, thus claim **27** is rejected for the same reasons as in Claim **25**.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **14** and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fimoff** et al. U.S. Pat. # 6,529,558 in view of **Yi**, U.S. Patent # 6,094,427

Considering claim **14**, the system according to claim 13, wherein said turbo decoder further comprises: a depuncture module configured to depuncture a redundant portion of said encoded stream;

Regarding claim 14, Fimoff et al do not specifically disclose a depuncture module. However, turbo decoders are known in the art as including depuncturer circuits. In this regard, Yi, for example, discloses the decoder 806 (fig.9), comprising a depuncturer 904. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Fimoff by providing the depuncturer of Yi, in order to recover the information signal.

Regarding claim **19**, see rejection of claim 14.

***Response to Arguments***

5. Applicant's arguments with respect to claims **11,13,16,18, 23** have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

6. Claims **1-4,6-9, 21, 22,26** are allowable over the prior art.

7. Claims **26** and **28** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose a system comprising: a formatter configured to format a plurality of data frames of received in a transport stream by inserting a plurality of synchronization data into said data frames to produce a block stream; an error correction encoder configured to encode said block stream to produce an error protected block stream; an interleave module configured to interleave protected block stream to produce a data stream; an inserter configured to insert a synchronization signal into said data stream; and a turbo encoder configured to encode said data stream to produce an encoded stream, as in claim **1**; a method for transmitting comprising the steps of: formatting a plurality of data frames received in a transport stream by inserting a plurality of synchronization data into said data frames to produce a block stream; error

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correction encoding said block stream to produce an error protected block stream;  
interleaving said error protected block stream to produce a data stream; inserting a  
synchronization signal into said data, turbo encoding said data stream to produce  
encoded stream, as claim 6;

**Conclusion**

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Paulos M. Natnael whose telephone number is (703)  
305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for  
the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the  
Patent Application Information Retrieval (PAIR) system. Status information for  
published applications may be obtained from either Private PAIR or Public PAIR.  
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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should  
you have questions on access to the Private PAIR system, contact the Electronic  
Business Center (EBC) at 866-217-9197 (toll-free).

PMN  
January 28, 2005

  
**PAULOS M. NATNAEL**  
**PATENT EXAMINER**